REMARKS

The Examiner has rejected claims 1-15 under 35 U.S.C. §103(a) in view of the following references: U.S. Patent No. 3,926,257 (Marrast), U.S. Patent No. 5,348,583 (Arfaei) and the "PolarSet Product Information."

The present invention relates to a method of reducing water and gas migration during the cementing of a subterranean formation in cold environments. The method includes the use of a set accelerator comprising an alkali or alkaline earth metal nitrate and an alkali or alkaline earth metal nitrite.

The present invention relies, in part, on the rapid development of static gel strength (*see*, Paragraph 13, 46 and 47) to prevent gas and water migration through the hardening cement slurry. All of the cited references are completely silent with regard to this important feature. Without adequate static gel strength, the cement slurry allows water and/or gas to permeate the slurry, which may weaken the cement and allow the formation of channels or flow paths through the hardened cement. Clearly, this would decrease or even eliminate the purpose for which the wellbore was cemented (*i.e.*, isolating the wellbore from the formation).

Addressing the art previously cited by the Examiner, Marrast simply teaches that a cement may incorporate a foaming agent and that the foamed cement may be useful in preventing gas migration. In fact, Marrast teaches away from the use of non-foamed cements to prevent gas migration (see, Col. 1, lines 17-25). At no point does this reference teach or suggest that gas migration can be controlled and/or prevented through the use of a cement having increased gel strength and reduced gel time.

Applicant also notes that Arfaei relates to cementing in the construction industry, where the cement is not required to be placed in a subterranean formation and, therefore, where gas and water migration are not as critical. The invention of Arfaei is directed to a wholly different application and would not be suitable for cementing subterranean formations. In addition, there is no mention in Afraei of gas migration prevention.

Finally, the PolarSet Product Information relates to cement used in the construction industry. As with Arfaei, this cement does not have the requirement of preventing or reducing gas migration. In fact, gas migration is not mentioned in this reference.

Applicants respectfully request that the Examiner consider these amendment and remarks as placing the present application in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

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